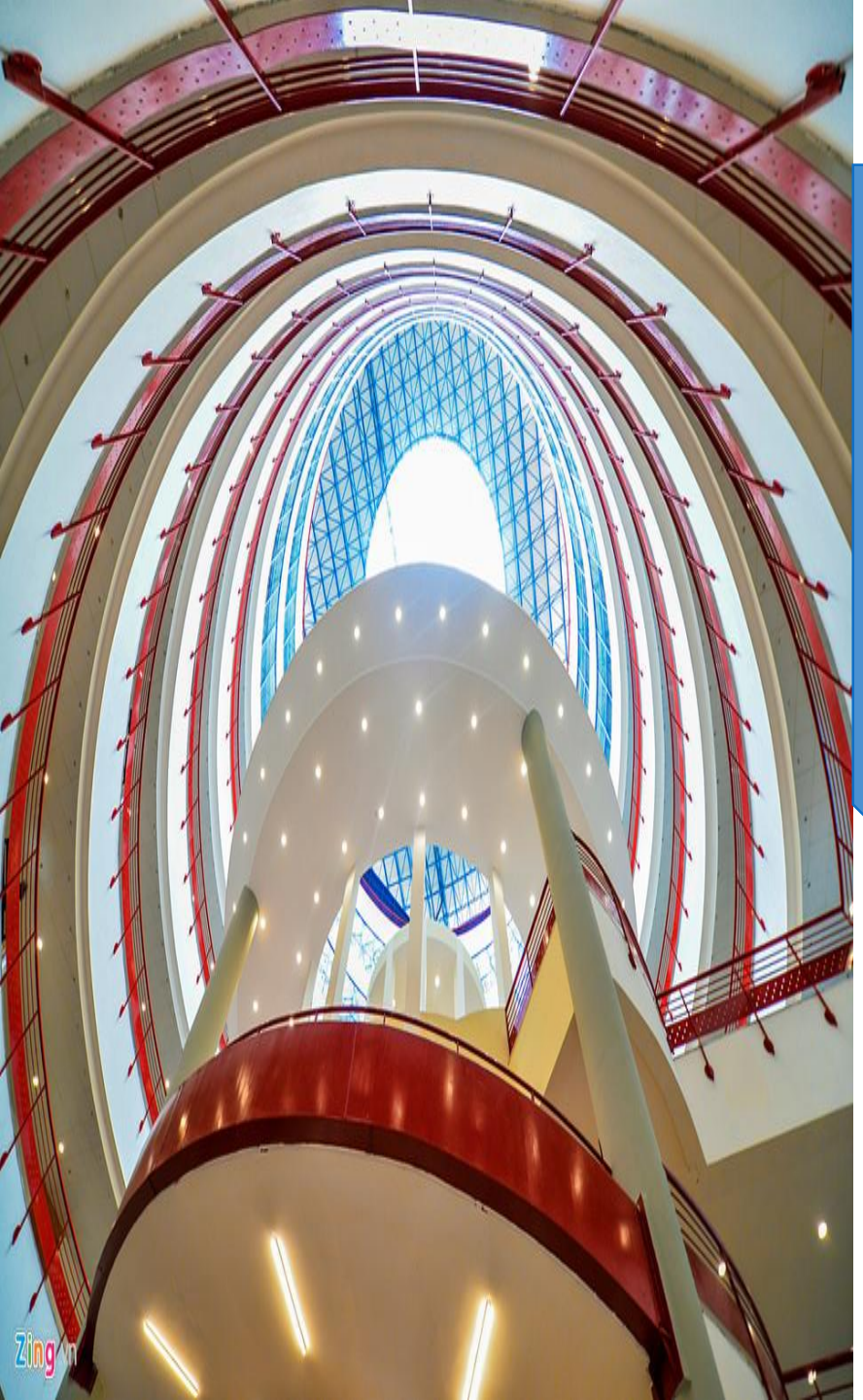

DATA-DRIVEN MARKETING

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Key Performance Indicators and Visualization

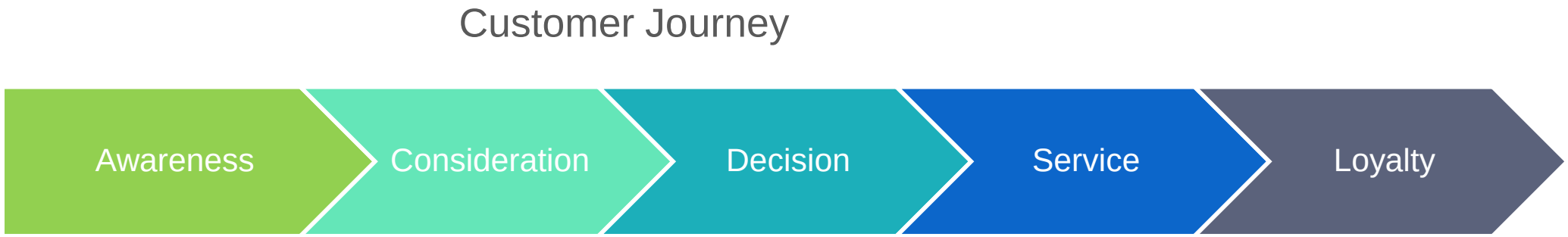
What is Key Performance Indicators(KPIs)

- **KPI:** a quantifiable measure of performance over time for a specific objective.
- Examples of KPIs:
  - Number of blog articles published this month
  - Number of customers retained this month
  - Percentage of overdue project tasks
  - Number of new customers
  - Number of engaged qualified leads in sales funnel

The importance of KPIs

- Why you need KPIs?
  - **Keep your teams aligned**. KPIs keep teams moving in the same direction
  - **Provide a health check**: KPIs give you a realistic look at the health of your organization, from risk factors to financial indicators
  - **Make adjustments**: KPIs help you clearly to see your successes and failures so you can do more of what's working, and less of what's not
  - **Hold your teams accountable**

KPI - Example



	Awareness	Consideration	Decision	Service	Loyalty
KPIs	**Number of people reached**	**New website visitors**	**Conversion rate, Online sales**	**Product reviews, customer service success rate**	**Retention rate, customer satisfaction score**
Business Goals	Increase awareness, interest	Increase website visitors	Increase conversion rate, online sales	Increase customer service satisfaction	Generate positive reviews, increase retention rate

What is a Metric

- A metric is a measurement you record to track some aspect of your business activity and measure the success or failure of the performance of that activity
- A metric reflects how successful the activities taking place are to support the accomplishment of the KPI

The Five Essential Nonfinancial Metrics

Brand awareness

- Brand awareness: Ability to recall a product or service
  - “Was the change in perception worth the marketing investment?”
  - Conduct survey or using social listening to measure
- For the 2007 Christmas season, Philips launched a new product branding campaign in the Netherlands for the Philips Nivea for Men Shaver. The campaign included integrated media with TV, MTV promotions, train station billboards, direct-mail postcards, and a dedicated web portal. Ipsos ASI, a United Kingdom-based advertising research agency, conducted weekly surveys of 120 men in the target demographic to track both brand- and product-specific awareness. Questions included:
  - “Thinking about all the different places you have seen, heard, or read about electric shavers recently, including all the different kinds of advertising, sponsorship, and other activities that promote them, have you seen, heard, or read anything about the following brands of electric shavers recently?”
  - Have you seen/heard/read/experienced [specific TV, print, etc., advertising]?”
  - What brand was the ad for?”

Churn Rate

- The essential metric to quantify customer loyalty is churn rate.
- Churn rate is percentage of existing customers who stop purchasing your products or services, measured in a year, 90 days, or 30 days
    - *Ex: Your customer churn rate is 20 percent in a year. If you have 100 existing customers at the beginning of the year, then at the end of the year you will have only 80 customers, assuming you do nothing to retain the 20 customers who leave*
- You should measure your customer churn rate either directly by tracking customer repeat purchases or indirectly through customer surveys
- Start with loyalty marketing campaigns to the highest-value customers, churn rate can be reduce significant

Customer Satisfaction

- Customer Satisfaction (CSAT) Measured by Asking the Essential Question

  How likely would you be to recommend [product, service, or company] to a friend or colleague?

- "Would you recommend to a friend?" is the essential question to define satisfied customers: meaning only customers responding 9 or 10 on a 10-point scale, with 10 being "would definitely recommend and I am truly satisfied."

- Fred Reichheld has used this question to define the "net promoter score", which is the subtraction of the average number of detractors (those who answer 0 to 6 on the 1 to 10 scale of "would you recommend?") from promoters (those who answer 9 or 10).

Take Rate

- This metric measures internal effectiveness of a campaign and can be linked to campaign cost
- **Take Rate** is just the percentage of customers who accept an offer
  - Ex: if you send out a demand generation marketing offer with 1,000 telemarketing calls and 50 people accept the offer, then the take rate is 5 percent
  - You also send this offer with 1000 SMS, 30 people accept the offer -> the take rate is 3 percent
  - Which channel we should choose?

Cost per acquisition (CPA)

- **The CPA** is the total cost of acquiring a new customer via a specific channel or campaign

CPA = total spent to acquire new customers via a specific channel or campaign / (#) new customers acquired via the same channel or campaign

Campaign	Cost	Customers Acquired	CPA	Sales Revenue	Sales per Customer	Value of Campaign
Happy Hour Event	$25000	40	$625	$50000	$1250	$25000
Webinar	$2000	10	$200	$5000	$500	$3000
Radio Commercial	$7000	50	$140	$6000	$120	-$1000

Cost per acquisition (CPA)

examples

Total Advertising spend	**$2000**
Facebook	$1200
Google Ads	$800
New Customers	80
Facebook	40
Google Ads	40
Total Cost per Acquisition (CPA)	$25
Facebook	$30
Google Ads	$20

- Pros:
  - Measures the success of various paid marketing channels
  - CPA only charges for a specific action taken by customers. It optimizes targeting the right audience.
- Cons:
  - Need other metrics (Marketing ROI, LTV…) to gain an accurate picture of all your marketing efforts

The Essential Financial Metrics

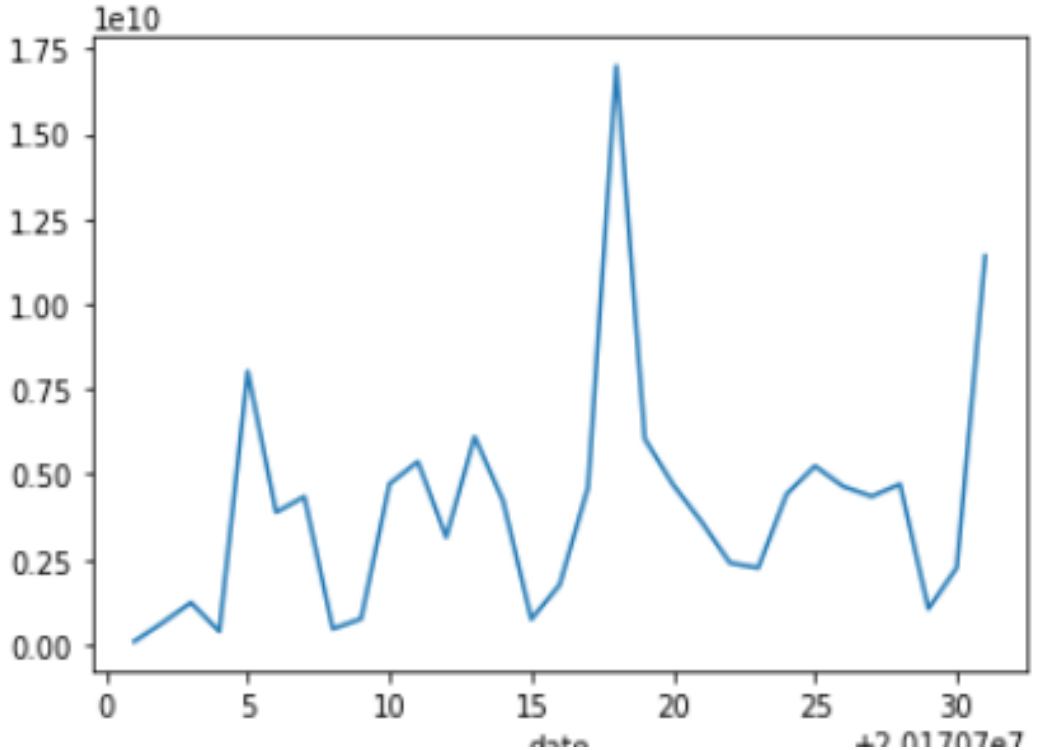
Sales Revenue

Sales Revenue Formula = Number of Units Sold x Average Sales Price per Unit

- **Profit = Revenue – Cost**

Sales Revenue Report

	Date	TotalSales
1	2010-12-01	748957.020
2	2011-01-01	560000.260
3	2011-02-01	498062.650
4	2011-03-01	683267.080
5	2011-04-01	493207.121
6	2011-05-01	723333.510
7	2011-06-01	691123.120



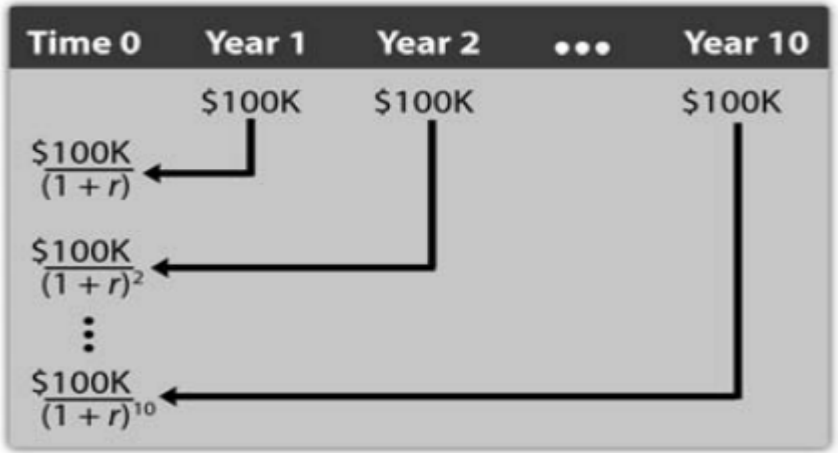
Present Value

- Present Value is the value for the cash discounted to include the time value of money, so that money in the future is worth less
- Ex: you get the large trophy and a check for $1 million, only to find to your dismay that there is fine print on the bottom of the check that you have the choice of winnings: $100,000 per year for 10 years or $520,000 cash today. You have to make a decision. What would you choose?
- With $1 today, we could invest it, suppose that r is the rate of return

$$\$1 \text{ today invested for one year} \rightarrow \$1 \times (1+r)$$

For our thought experiment, if we had $100K per year for 10 years, with payments at the end of each year, the value today is:

$$PV = \frac{\$100K}{(1+r)} + \frac{\$100K}{(1+r)^2} + \frac{\$100K}{(1+r)^3} + \cdots + \frac{\$100K}{(1+r)^{10}}$$



Net Present Value

- NPV = PV – Cost
- NPV enables you to compare marketing campaigns or initiatives that have different costs

$$\mathrm{NPV} = -C_0 + \frac{(B_1 - C_1)}{(1+r)} + \frac{(B_2 - C_2)}{(1+r)^2} + \frac{(B_3 - C_3)}{(1+r)^3} + \cdots + \frac{(B_n - C_n)}{(1+r)^n}$$

- C0: startup marketing cost
- Bn: Revenues at time period n
- Cn: the cost of marketing in time period n
- R: investment rate

Customer Lifetime Value

Formula

$$CLTV = -AC + \frac{(M_1 - C_1)p}{(1+r)} + \frac{(M_2 - C_2)p^2}{(1+r)^2} + \cdots + \frac{(M_n - C_n)p^n}{(1+r)^n}$$

- AC: the acquisition cost of the customer
- Mn: margin in time period n
- Cn: cost in time period n
- P: the probability the customer will stay
- R: investment rate

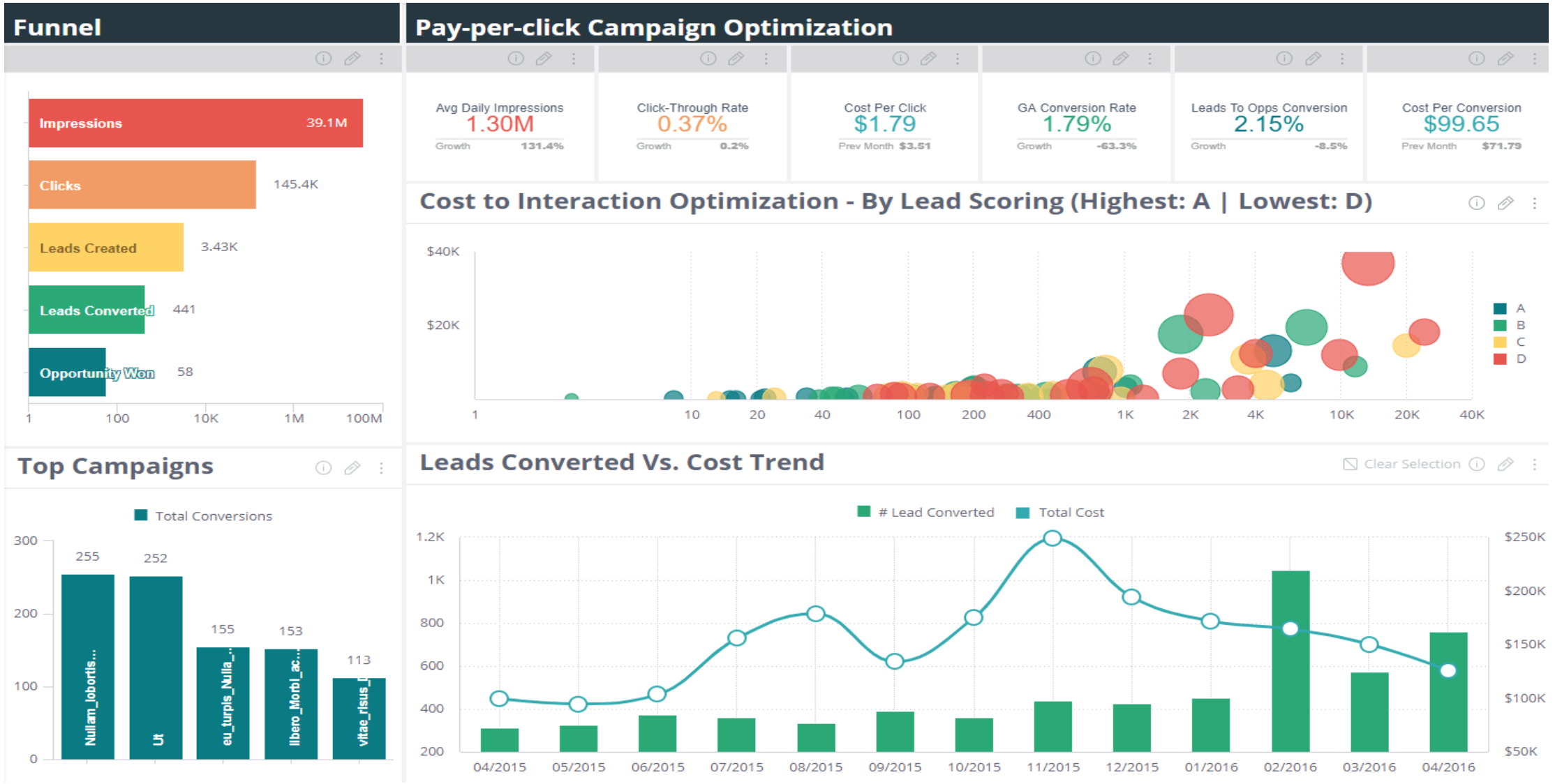
Customer Lifetime Value

Discount Rate r		12% *				
Acquisition Cost (AC)		$100 *				
Churn Rate		15% *				
Retention Rate p = (1 – Churn)		85%				
	Year 0 ($)	Year 1 ($)	Year 2 ($)	Year 3 ($)	Year 4 ($)	Year 5 ($)
Margin *		60	55	75	95	100
Marketing Cost *	(100)	(10)	(10)	(15)	(15)	(15)
Other Costs to Serve *		(5)	(7)	(6)	(7)	(8)
Customer Profit	(100)	45	38	54	73	77
Profit x $p^n/(1 + r)^n$	(100)	34	22	24	24	19
CLTV	$23					

* Type your numbers here

Project: Create a KPI Dashboard

Marketing KPI Dashboard example



Project: Computing KPIs using a marketing dataset

Field Name	Description
fullVisitorId	The unique visitor ID
visitNumber	The session number for this user. If this is the first session, then this is set to 1.
visitId	An identifier for this session. This is part of the value usually stored as the _utmb cookie. This is only unique to the user. For a completely unique ID, you should use a combination of fullVisitorId and visitId.
visitStartTime	The timestamp (expressed as POSIX time).
bounces	Total bounces (for convenience). For a bounced session, the value is 1, otherwise it is null.
hits	Total number of hits within the session.
pageviews	Total number of pageviews within the session.
timeOnSite	Total time of the session expressed in seconds.
transactions	Total number of ecommerce transactions within the session.
totalTransactionRevenue	Total transaction revenue within the session
visits	The number of sessions (for convenience). This value is 1 for sessions with interaction events. The value is null if there are no interaction events in the session.
trafficSource	This section contains information about the Traffic Source from which the session originated.

Source: https://support.google.com/analytics/answer/3437719?hl=en